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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/511,171

10/14/2004

Nikolai Ignatyev

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7590

05/02/2006

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EXAMINER

NWAONICHA, CHUKWUMA O

ART UNIT

PAPER NUMBER

1621

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/511,171	IGNATYEV ET AL.	
	Examiner	Art Unit	
	Chukwuma O. Nwaonicha	1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-20 are pending in the application.

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-16 provide for the process for making compounds, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a process without any active, positive steps delimiting how this use is actually practiced.

Claims 1-16 are rejected under 35 U.S.C. 101 because the claimed recitation of a process, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claims 19 and 20 are provides for the use of compounds, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it

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merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 19 and 20 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kovaleva et al., {Preparation perfluoroalkylphosphonic Acids And Their Derivatives,

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Journal of General Chemistry, USSR, 2245-2248} and Pavlenko et al. {Esters of Bis(perfluoroalkyl)phosphonic Acids, Journal of General Chemistry, USSR, 474-476}

Applicants claim perfluoroalkylphosphonates and bis(perfluoroalkyl)phosphinates selected from the group consisting of partially alkylated and peralkylated ammonium, phosphonium, sulfonium, pyridinium, pyridazinium, pyrimidinium, pyrazinium, imidazolium, pyrazolium, thiazolium, oxazolium and triazolium salts and a process for the preparation of monohydroperfluoroalkanes, bis(perfluoroalkyl)phosphinates and perfluoroalkylphosphonates, comprising at least the treatment of at least one perfluoroalkylphosphorane with at least one base and, if desired, an acid in a suitable reaction medium; wherein all the variables are as defined in the claims.

Determination of the scope and content of the prior art (M.P.E.P. §2141.01)

Kovaleva et al. teach a process for the preparation of perfluoroalkylphosphonate compounds in the presence of a base followed by the reaction with an acid. See reaction step on page 2245.

Pavlenko et al. teach the salts of perfluoroalkylphosphonate compound. Additionally, Pavlenko et al. teach the process of preparing perfluoroalkylphosphonates in alcohol solvent. See page 474.

Ascertainment of the difference between the prior art and the claims (M.P.E.P. §2141.02)

Kovaleva et al. process for preparing perfluoroalkylphosphonate compounds differs from the instantly claimed process in that applicants' process specifically employ alcohol as an organic solvent while Kovaleva et al. teach a process that employed

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hydrocarbon solvent. Another difference between applicants claimed invention and the process of Kovaleva et al. is that Blackburn et al. is silent about the salts of perfluoroalkylphosphonates and bis(perfluoroal)kylphosphinates.

The difference between applicants claimed salts and that of Pavlenko et al. is Pavlenko et al. salt is more limited genus. Another difference between applicants' invention and that of Pavlenko et al. is that Pavlenko et al. teach the process of preparing perfluoroalkylphosphonates in alcohol solvent while applicants claim a process that employs an alcohol solvent and a hydrocarbon solvent. See page 474.

Finding of prima facie obviousness--rational and motivation (M.P.E.P. §2142-2143)

The instantly claimed perfluoroalkylphosphonate and bis(perfluoroal)kylphosphinate salts and the process for the preparation of monohydroperfluoroalkanes, bis(perfluoroalkyl)phosphinates and perfluoroalkylphosphonates would have been suggested to one of ordinary skill because one of ordinary skill wishing to obtain perfluoroalkylphosphonate and bis(perfluoroal)kylphosphinate salts, and prepare monohydroperfluoroalkanes, bis(perfluoroalkyl)phosphinates and perfluoroalkylphosphonates is taught to employ the processes of Kovaleva et al. and Pavlenko et al.

One of ordinary skill in the art would have a reasonable expectation of success in practicing the instant invention by varying the solvents and reactants from the teaching of Kovaleva et al. and Pavlenko et al. to arrive at the instantly claimed perfluoroalkylphosphonate and bis(perfluoroal)kylphosphinate salts, and the process for

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the preparation of monohydroperfluoroalkanes, bis(perfluoroalkyl)phosphinates and perfluoroalkylphosphonates. Said person would have been motivated to practice the teaching of the references cited because they demonstrate that the perfluoroalkylphosphonate and bis(perfluoroalkyl)phosphinate salts and the monohydroperfluoroalkanes, bis(perfluoroalkyl)phosphinates and perfluoroalkylphosphonates are useful in industrial applications. Therefore, the instantly claimed invention would therefore have been obvious to one of ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chukwuma O. Nwaonicha whose telephone number is 571-272-2908. The examiner can normally be reached on Monday thru Friday, 8:30am to 5:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Patent Examiner
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